Abstract Submitted
for the DAMOP18 Meeting of
The American Physical Society

Undergraduate Research Laboratory for Controlling Atoms with Frequency Modulated Light MATTHEW WRIGHT, Adelphi Univ, TANNER GROGAN, JAMES ST. JOHN, TARA PENA, Adelphi University — We have developed an undergraduate research lab for controlling atoms with pulsed frequency chirped laser light. We can tune the chirp rate to 1 GHz in 4 ns and pulse the laser as short as 3 ns. We will discuss recent results of undergraduate research probing interference in spontaneous emission in dilute Rb gases with pulsed lasers. We will also discuss how we plan to use this apparatus to explore standard atomic physics experiments such as STIRAP, ARP, etc and use it to conduct future research on coherently controlling photon-assisted ultracold collisions.

Matthew Wright
Adelphi Univ

Date submitted: 06 Feb 2018 Electronic form version 1.4